Hybrid™ User Guide

CHAPMAN/LEONARD
STUDIO EQUIPMENT, INC.

888-883-6559
www.chapman-leonard.com

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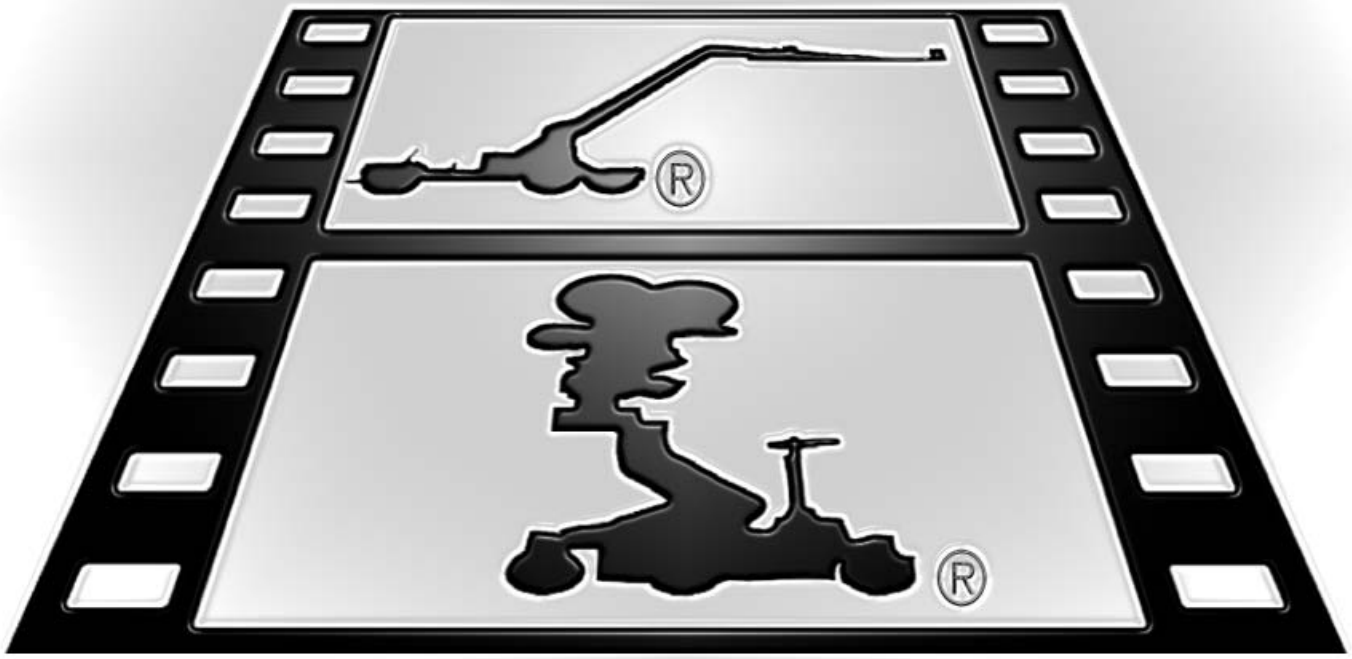

It is Chapman/Leonard's goal to deliver exceptional Customer Service. Therefore, we are compiling this Users Guide to aid in the reordering of Replacement Parts for your Leased Equipment. For any questions regarding this Users Guide, please contact Customer Service at 888-883-6559 or 818-764-6726.

Chapman/Leonard Certified Locations:

MAIN OFFICE
12950 Raymer Street, North Hollywood, CA 91605
888-883-6559 or 818-764-6726
Fax: 888-502-7263 or 818-764-4347

New Location

Texas
1901 E. 51st Street, Suite 38
Austin, Texas 78723
contact: James Marks 512-473-0084
or 888-758-4826
Fax: 512-473-0042

Florida
9460 Delegates Drive
Orlando, Florida 32837
888-337-8243 or 407-851-3456
Fax: 407-855-1653

New Location

Vancouver, British Columbia
5045 Still Creek Avenue
Burnaby, British Columbia
V5C 5V1 Canada
contact: Dan Bennett 604-299-0913
or 866-848-2602
Fax: 604-299-0926

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CONTENTS

3 Specifications

4 Optional Configurations

8 Tracks & Setup Strategy

9 Steering Choices

10 Shifting/Steering Modes

11 Maintenance

12 Arm Markers

13 Feathering Levers

14 Charging the Dolly

15 Control Valve & Gauge

15 Brakes

16 Accessory Cart Features

17 Shipping and Liability

18 Technical Help

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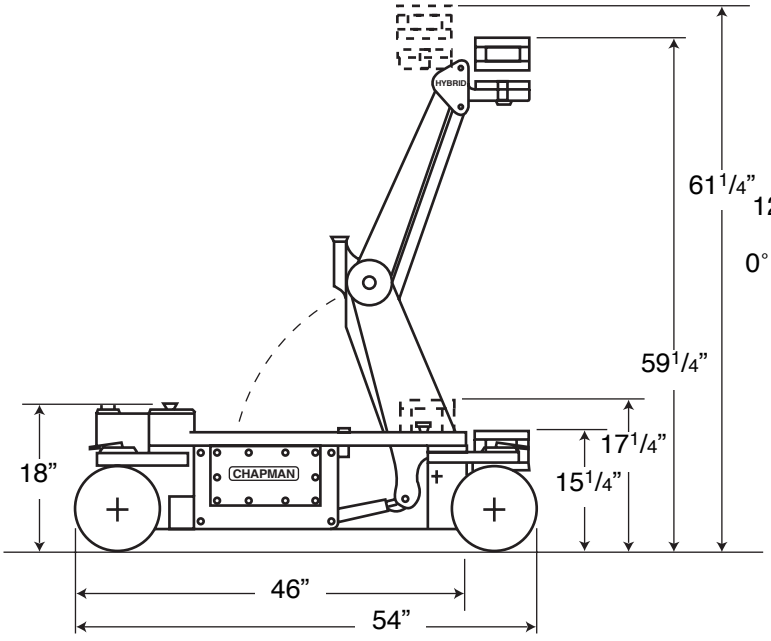
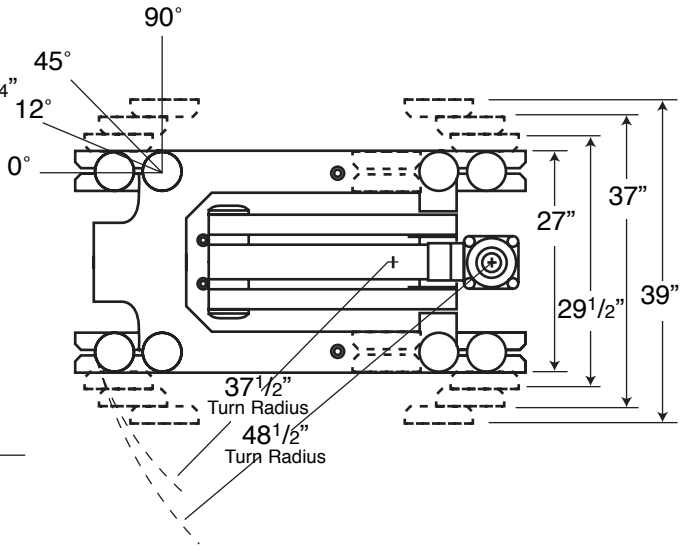
Hybrid™ Specifications

Minimum Camera Mount Height	18 in. 48 cm
Maximum Camera Mount Height	60 in. 1.5 m
Vertical Boom Travel	42 in. 1.06 m
Minimum Camera Mount Height (Low Plate Setup)	1 13/16 in.
Maximum Camera Mount Height (Low Plate Setup)	60 1/2 in.
Maximum Load Capacity with Accumulator Charge @ 3300psi	750 lbs. 341 kg
Maximum Number of Lifts on a Single Charge	6 Lifts
Carrying Weight	465 lbs. 211 kg

The Hybrid in Low Profile Mode with Attachments Removed for Shipping or Storage. With the deck controls removed there is no interference for 360° pan shots.





The Hybrid is capable of two different steering modes. In **Conventional Mode** the rear wheels pivot as the operator makes a tracking turn. In **Crab Mode** all wheels turn in unison enabling the dolly to be moved in any direction while maintaining the orientation of the camera plane.

The Universal Stop Valve controls arm movement with **smooth feathered stops**. Adjustments to the Universal Stop Valve can be made without tools or the need to remove any covers or access plates. Feathering Levers are located below the Steering Controls, within the operator's reach for ease of use.

The arm is a new design with greater **rigidity, smoothness, speed and quietness** of operation. **Six full strokes** of the arm is possible with a single charge.

A new **tire design** has dramatically reduced friction for smoother rolling shots. Tires can be matched to various track configurations.

The Sideboard System provides complete **walk-around-capability** on the dolly in both high and low level setups.

The Hybrid III has a built-in heat control system in the hydraulic system to maintain a minimum hydraulic oil temperature of 70ºF. This maintains **optimum performance in even the coldest environment**.

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Hybrid™ Optional Configurations

4 Way Leveling Center Post Kit

Standing Board with Seats

High Post Kit with Front Board

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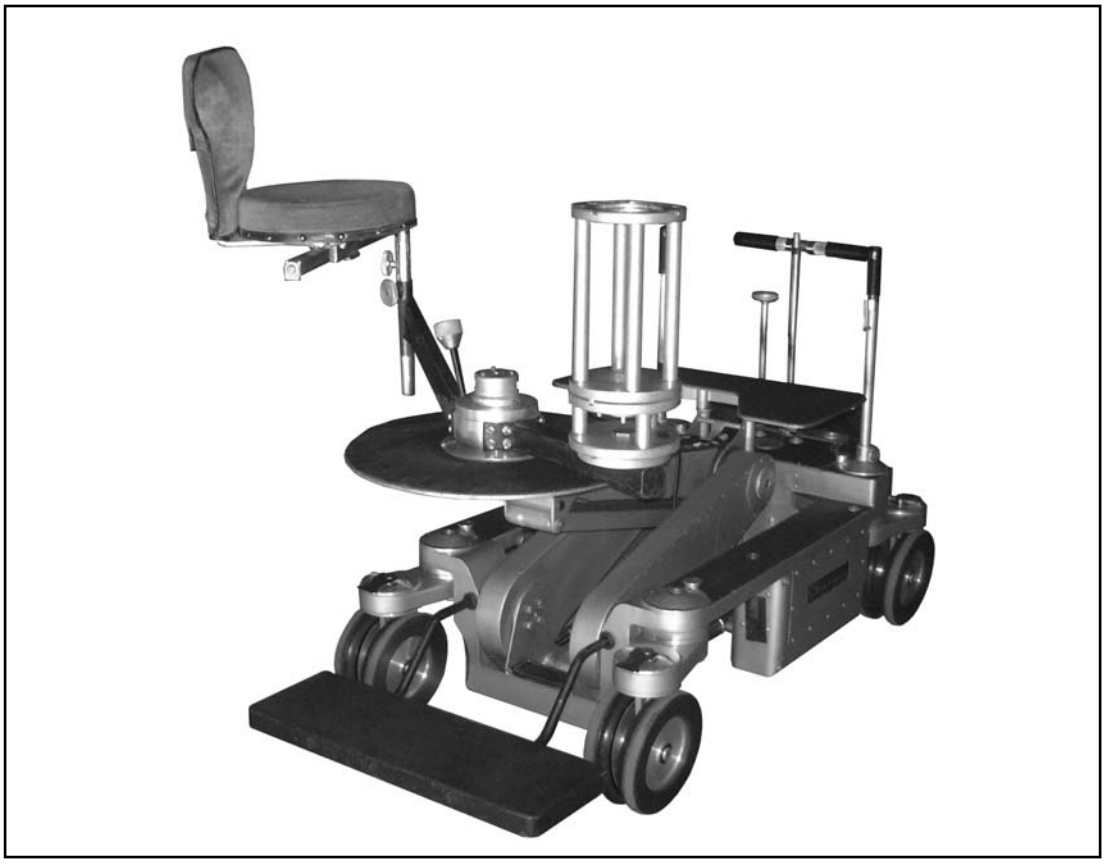
Front and Side Board with Seats on the Arm



Film Turret with Front Board and Standing Board

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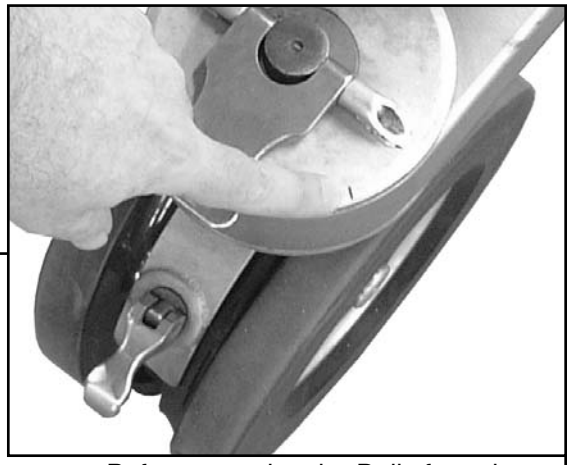
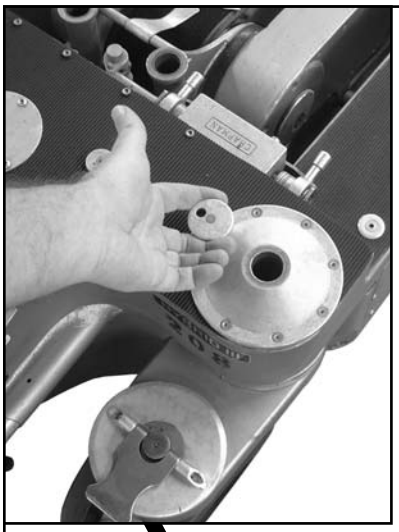
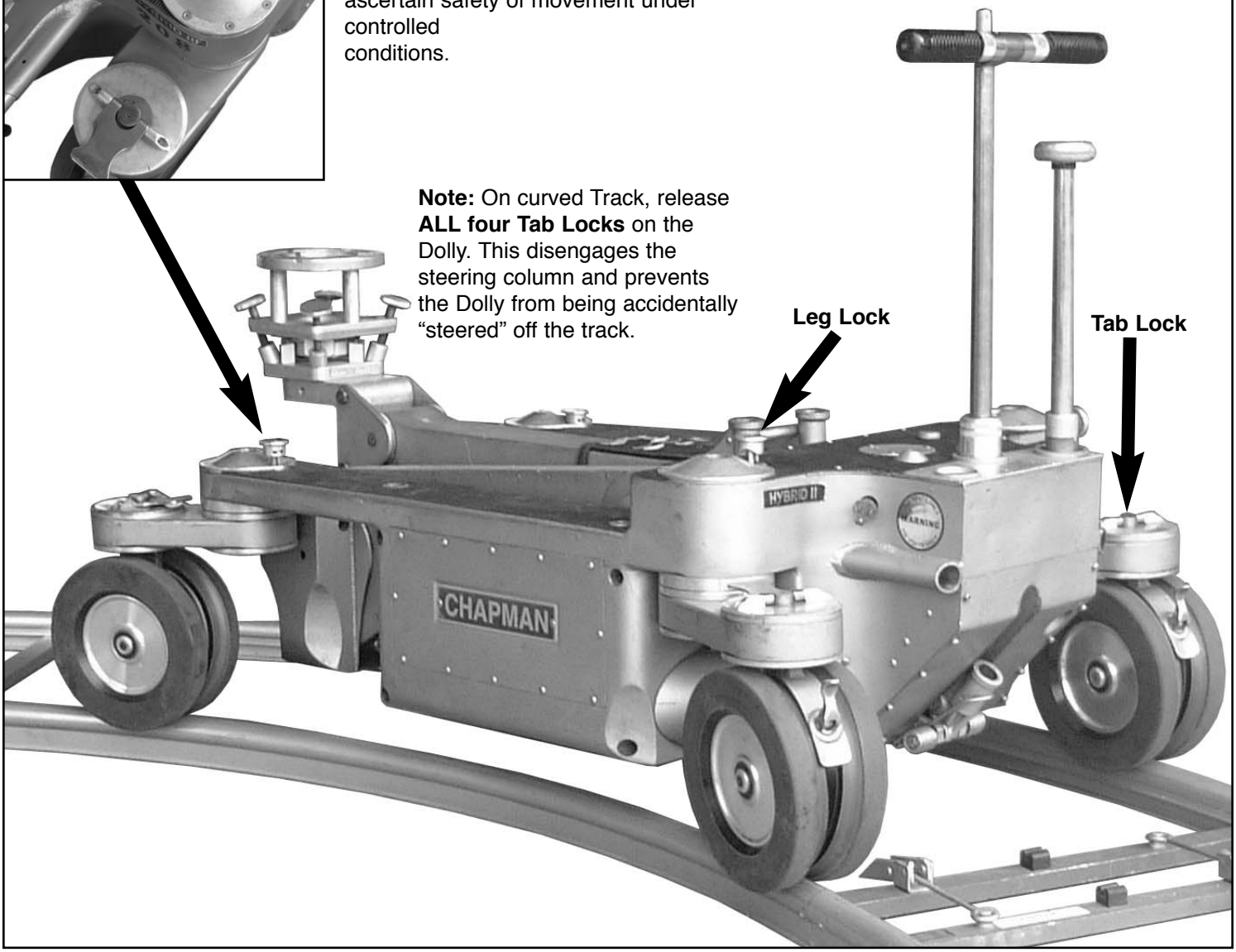


Before removing the Dolly from the track, tighten the Tab Lock with the indicator pointing at the Alignment Mark.



When operating on curved track, release both **LEG LOCKS** ***On the Inside Curve of the Track.*** This will allow the wheels to articulate with the requirements of the track. Excess speed on the track could result in a derailment. Weighting the Dolly on the inside of a turn helps offset the centrifugal force effect. Remember to ascertain safety of movement under controlled conditions.

Note: On curved Track, release **ALL four Tab Locks** on the Dolly. This disengages the steering column and prevents the Dolly from being accidentally "steered" off the track.



When using curved track, freeing the Wheels to follow the track is achieved by unlocking the 2 Leg Locks on **the inside curve of the track.**

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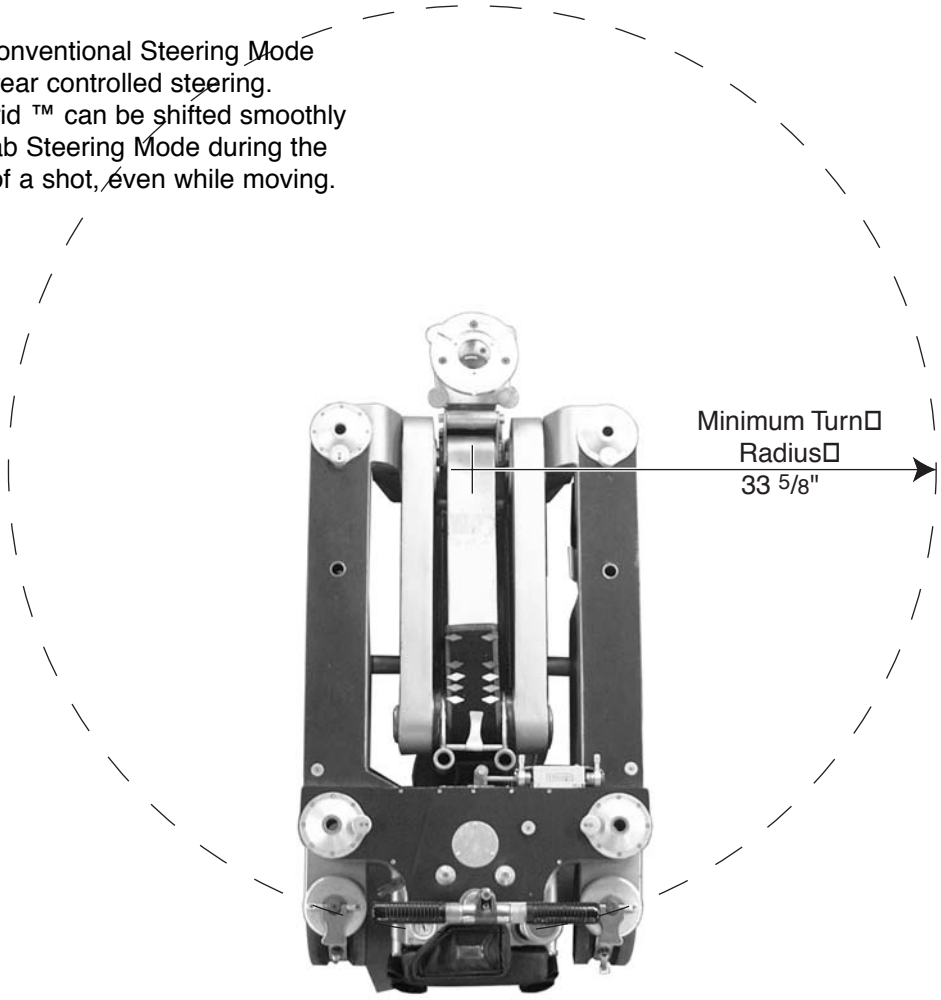
Hybrid™ Steering Choices

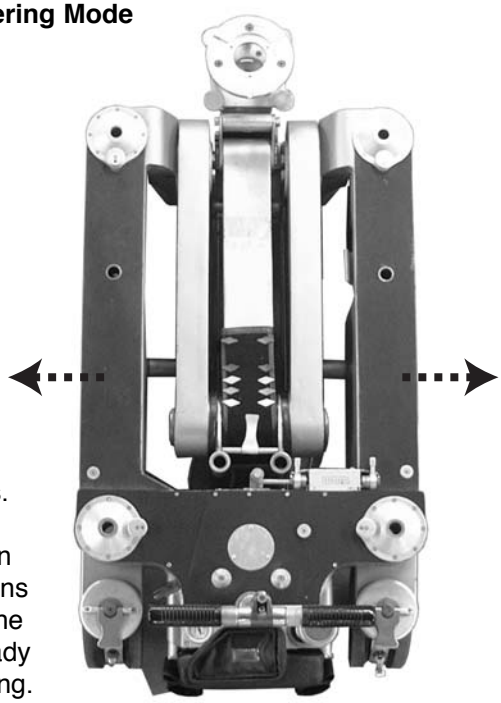
The Conventional Steering Mode is rear controlled steering. The Hybrid ™ can be shifted smoothly into Crab Steering Mode during the course of a shot, even while moving.



Conventional Steering Mode

Spray the tires with Zep Par NC Silicone Spray (Key Words on Label “Mold Release Agent”). This will improve performance on Floors, Hardwood, Track and even on Concrete. That’s because friction is the culprit behind tire squeaks and the tendency of tires to stick to track or polished floors. Treated tires begin rolling and run through turns with only moderate force.

The Crab Steering Mode is the selection used most often by experienced Grips. It gives them more control moving the Dolly instantly in any direction. The camera lens maintains its orientation to the picture plane, insuring a steady shot without unwanted panning.



Crab Steering Mode

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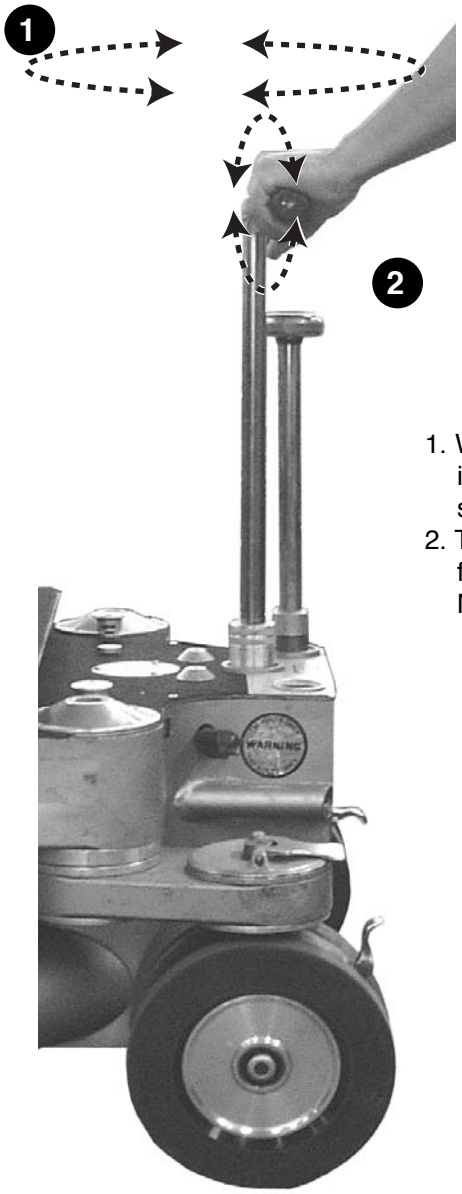
Hybrid™ Shifting/Steering Modes

The Hybrid™ is capable of two different steering modes. In **Conventional** Mode the rear wheels pivot as the operator makes a tracking turn. In **Crab** Mode all wheels turn in unison enabling the dolly to be moved in any direction while maintaining the orientation of the camera plane. The operator can select which mode to use by twisting the Steering Handles.



1. Wiggle the Steering Column to insure that all four wheels are straight.
2. Twist the Handle gently to shift from Crab to Conventional Mode. If the transmission still won't shift, repeat step 1.

When attaching the Steering Column to the Dolly, the Lockdown Collar should be tightened by hand only.
Never use pliers or channel locks on any part of the Dolly.

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Always begin cleaning the Dolly with a Vacuum Cleaner. Never use an air hose, because dirt and metal shavings will find their way into joints and bearings. This can seriously shorten the life of the Dolly.

Never directly spray the Dolly with water. Use soap and water applied to a cloth or paper towel, or preferably a brush to wipe down the rubber and metal parts of the Dolly.

Wax the exterior of the Dolly using ***Megular's Mirror Glaze Cleaner Wax***. This keeps the Dolly cleaner during regular use and preserves the finish. A clean Dolly will insure optimum performance with smooth and quiet movements while enhancing its aesthetics.

Spray the tires with ***Zep Par NC Silicone Spray*** (Key Words on Label are "Mold Release Agent"). This dramatically improves Tire Performance on Tile Floors, Hardwood, Track and even on Concrete. Use the same spray to clean the Tires.

For Metal.

For Rubber and Plastic.

Always read Warning Labels.

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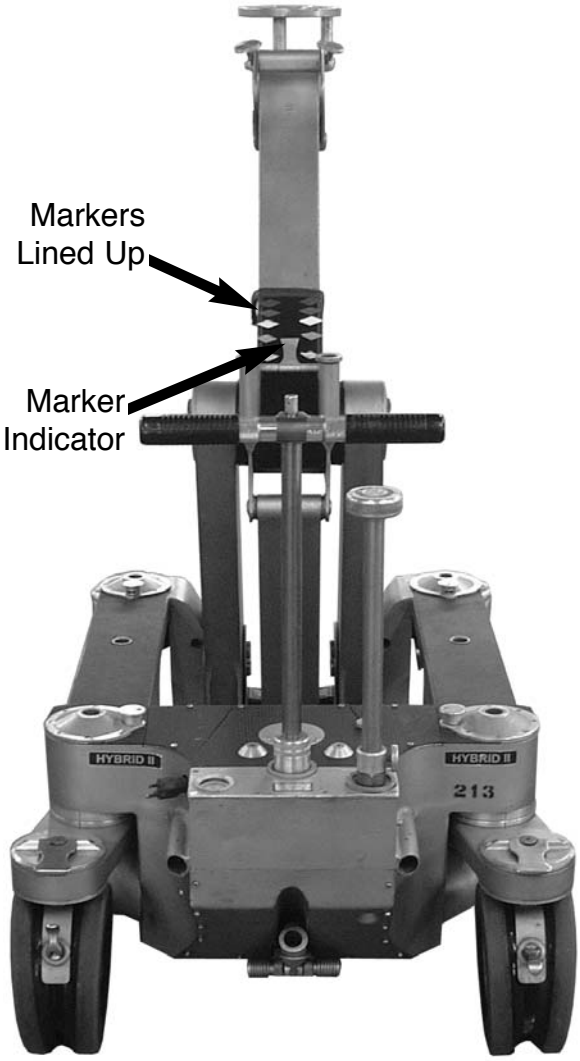
Hybrid™ Arm Markers

Colored Velcro Markers attach to the Arm (Upper and Lower). They can be repositioned to different locations on the Arm as a visual aid in repeating an Arm movement.

The Arm travels on a vertical line, eliminating focus problems on extreme closeups. Precise repetitive Stops are possible at all speeds. An improved Stop Valve System allows even faster, smoother stops.

A variety of options are available to the Grip when using the Control Valve.



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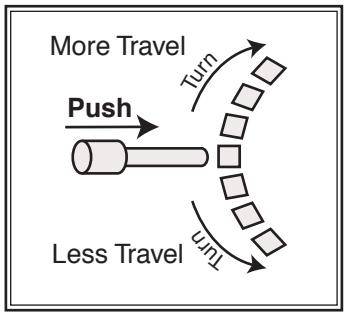
Hybrid™ Feathering Levers

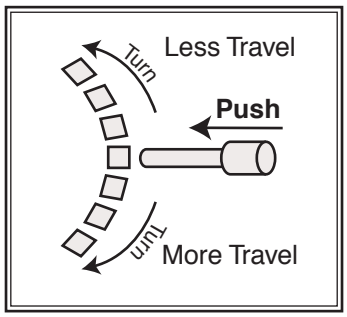
The **Universal Stop Valve** regulates the speed and smoothness of the Arm deceleration to a selected Stop. The Feathering Levers are located to either side of the Steering Handle. They are used for fine tuning the operation of the Universal Stop Valve. The Arm will move to the upper and lower Stops that the operator has designated, instead of the factory settings. This also insures that the Arm does not “Bottom-Out” when lowered to the Chassis.

The **UP Feathering Lever** is located to the right (standing at the rear of the Dolly). Pushing the Lever in to engage, then moving the Lever ***Back*** (ratcheting) allows the Arm to travel further up (Maximum Arm Height). Moving the Lever ***Forward*** (ratcheting) limits the Arm travel height.

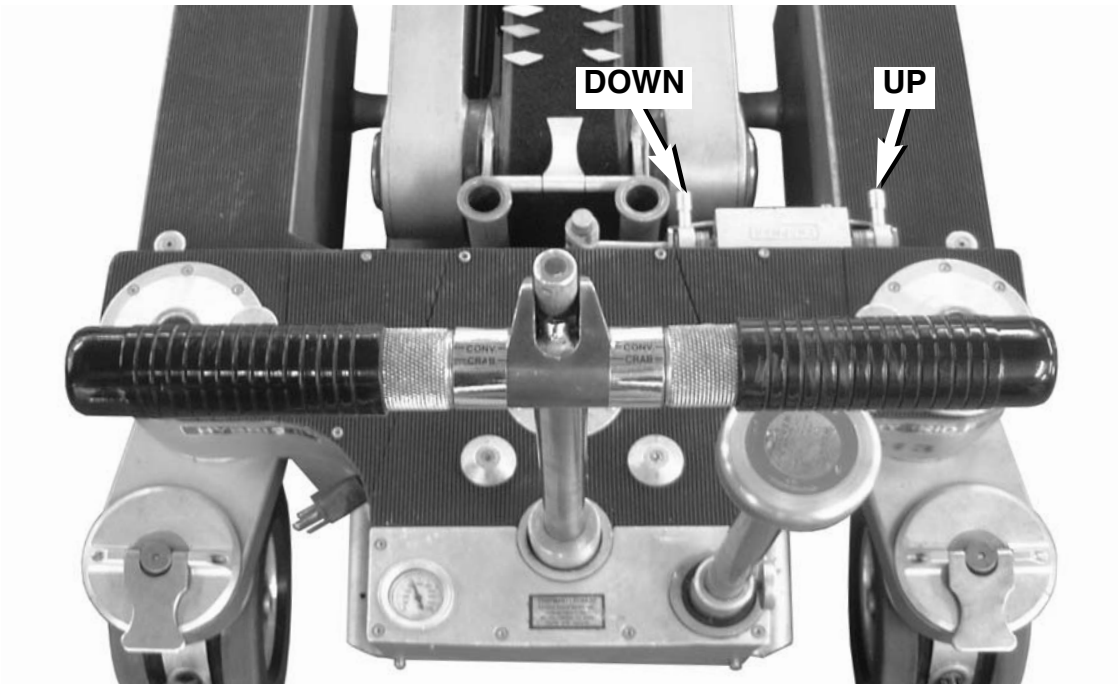
The **DOWN Feathering Lever** is located to the left. Pushing the Lever in to engage, then moving the Lever ***Back*** (ratcheting) limits the Arm movements lowest position. Moving the Lever ***Forward*** (ratcheting) allows the Arm to travel to a lower position (Minimum Camera Height).



UP



DOWN



Looking down while standing at the rear of the Dolly.

When making Stop Adjustments:

1. Be certain the Arm is well beyond the desired Stop point. Then turn the Lever in beyond the desired Stop point.
2. Open the Main Control Valve to approach the desired Stop.
3. Open Lever to achieve movement until the desired Stop point is reached.
4. Close the Main Control Valve.

For rapid deceleration beyond the normal for this system, the Dolly Grip can use the Stop Valve to initiate the Stop, then finalize the Stop with the Main Control Valve.

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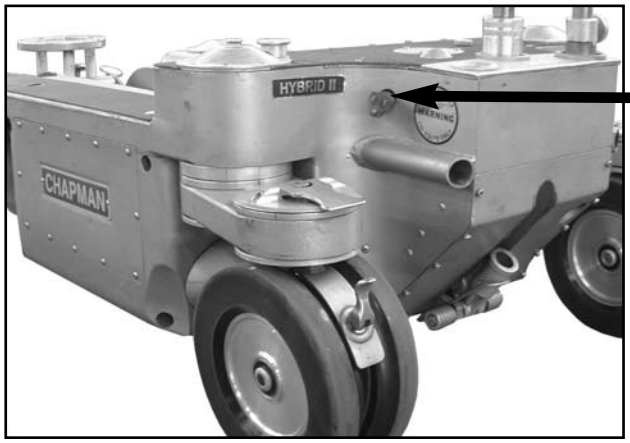
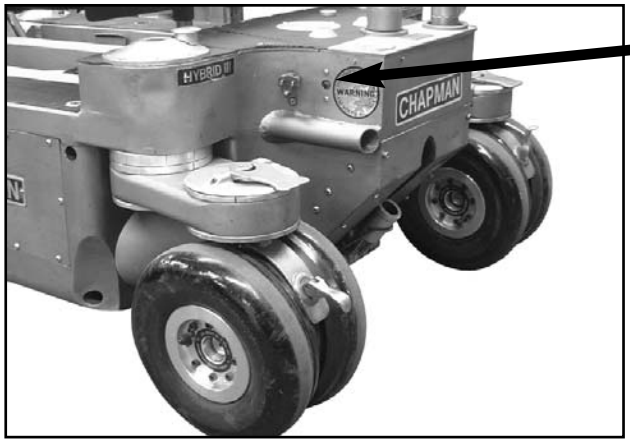
Hybrid™ Charging the Dolly - Electronics

A Female Plug can be attached to the Male Electrical Plug (110v) located at the rear of the Dolly. Charging will immediately begin. The unit will stop charging when the Dolly Hydraulic System is fully charged.



Electrical Plug

Do not attempt maintenance on the Dolly when it is plugged into an electrical outlet.



The **Charging Bypass Switch** is located next to the Electrical Plug on the Hybrid III dolly. When filming in a cold environment, activating the Charging Bypass Switch allows the Heating Pad to warm the hydraulic oil without having the noise of the Charging System adding pressure to the Accumulator.

Between film takes, when noise is not a factor, deactivate the Charging Bypass Switch to allow the Hybrid III to charge the hydraulic system.

Hybrid™ Charging the Dolly - Manual

Insert the Valve Control Handle into the Hand Pump Receptacle. Approximately 60 full strokes are needed to fully charge the Dolly system to 2500 psi. This pressurizes the nitrogen in the accumulators, which in turn moves the oil through the Hydraulic System.

The Valve Control Handle doubles as a Charging Handle when it is inserted into the Hand Pump.

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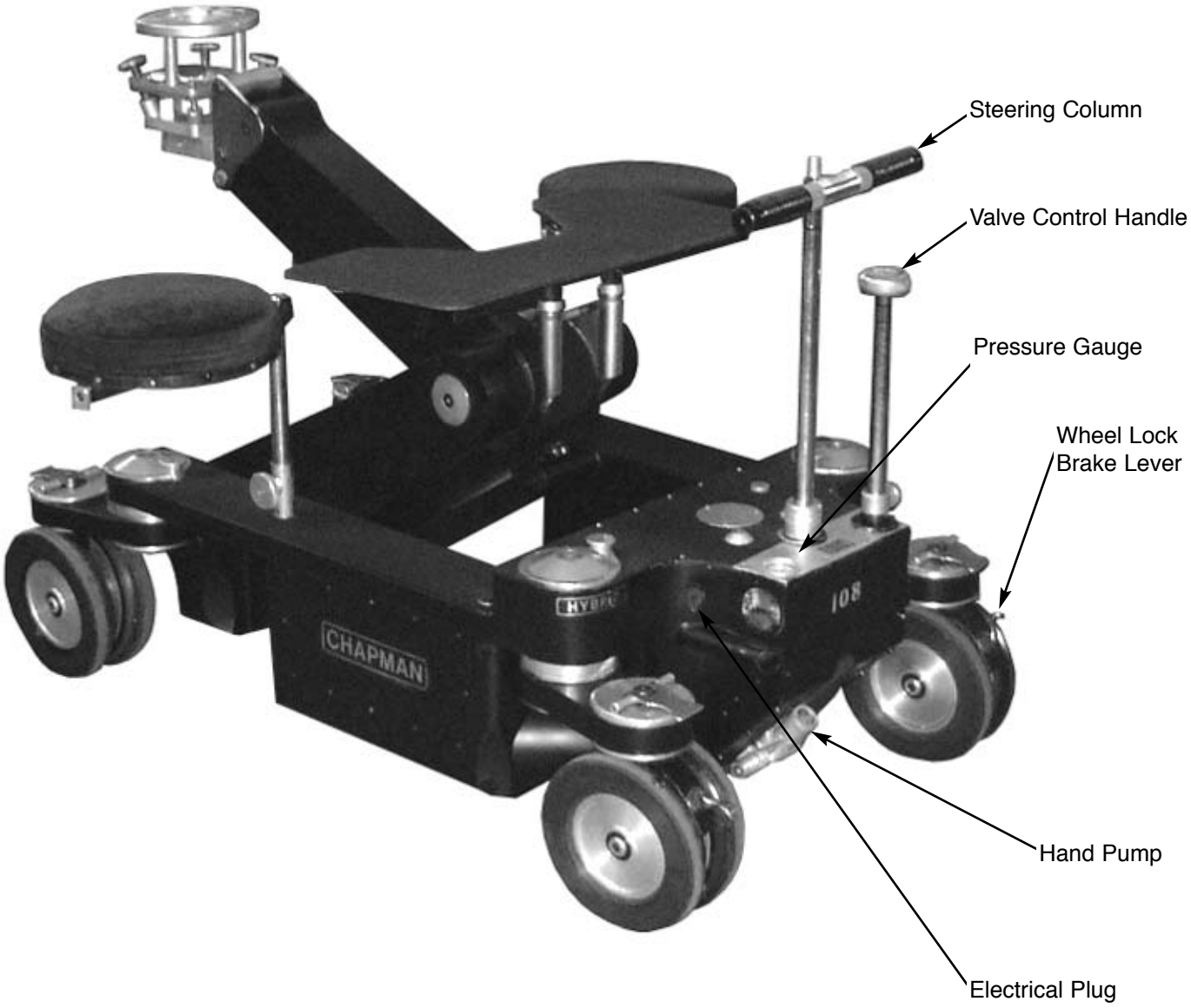
Hybrid™ Control Valve & Gauge

The Control Valve regulates the movement of the Arm. A fully charged system will read 3300 psi on the Pressure Gauge. This is enough pressure to enable 5 to 7 full strokes/lifts of the payload (camera). Total Payload = 750 lbs. @ 3300 psi. As a safety feature the Relief Valve will open automatically at 3500 psi.



Hybrid ™ Brakes

Brakes on each of the rear wheels hold the Dolly stationary between planned moves. The Wheel Locks are not intended for stopping the Dolly while in motion. The Hybrid ™ should always be held in place with Blocks or Wheel Chocks when on any kind of incline.

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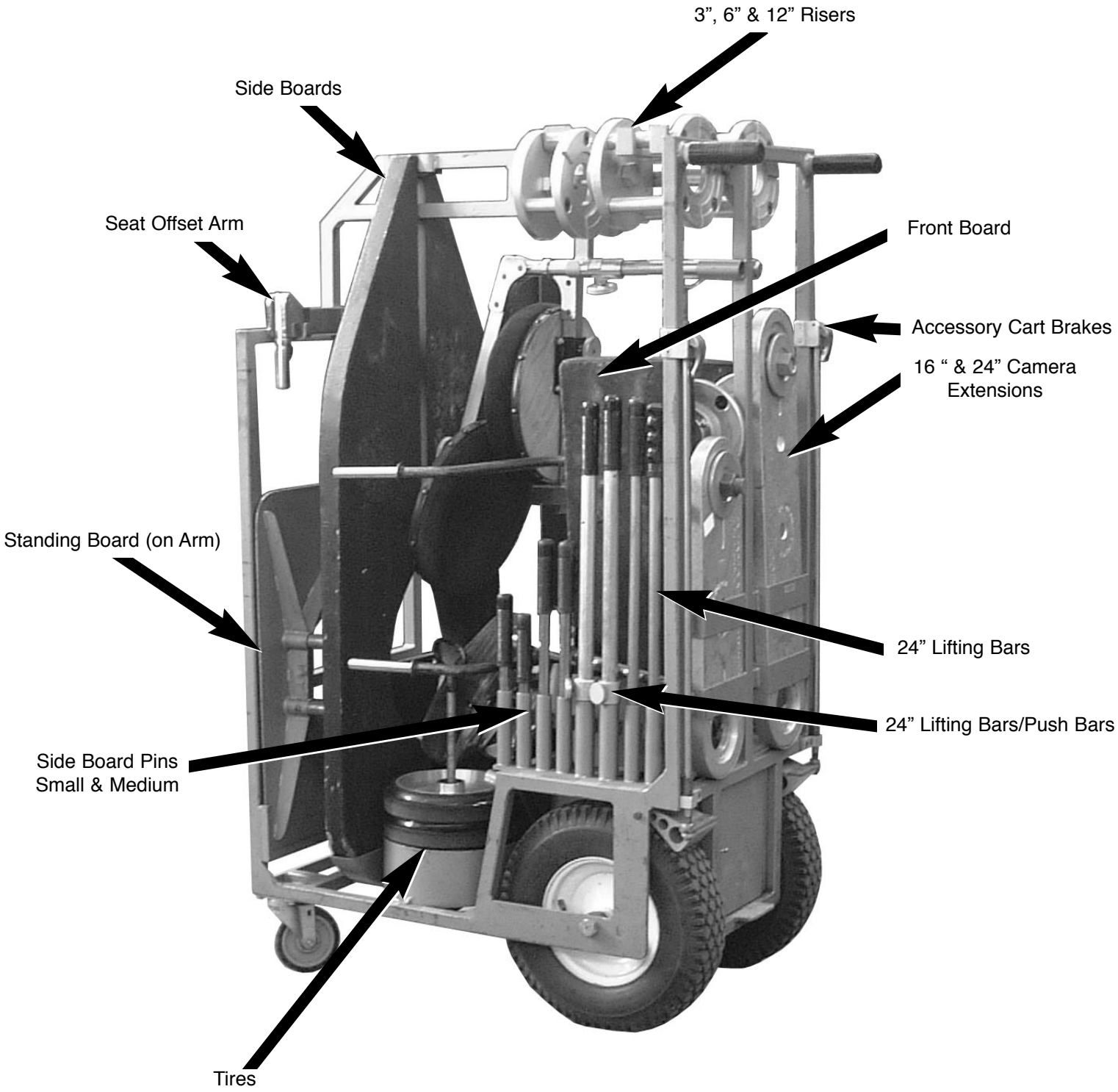
Hybrid™ Accessory Cart



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Hybrid™ Shipping and Liability

The Hybrid ™ is in the **Care, Custody and Control** of the Customer until it is returned and reaches a Chapman/Leonard Studio Equipment, Inc. facility (Los Angeles or Orlando).

The Customer is responsible for providing a Certificate of Insurance for the Dolly and its accessories for their full replacement value. The following insurance requirements are necessary:

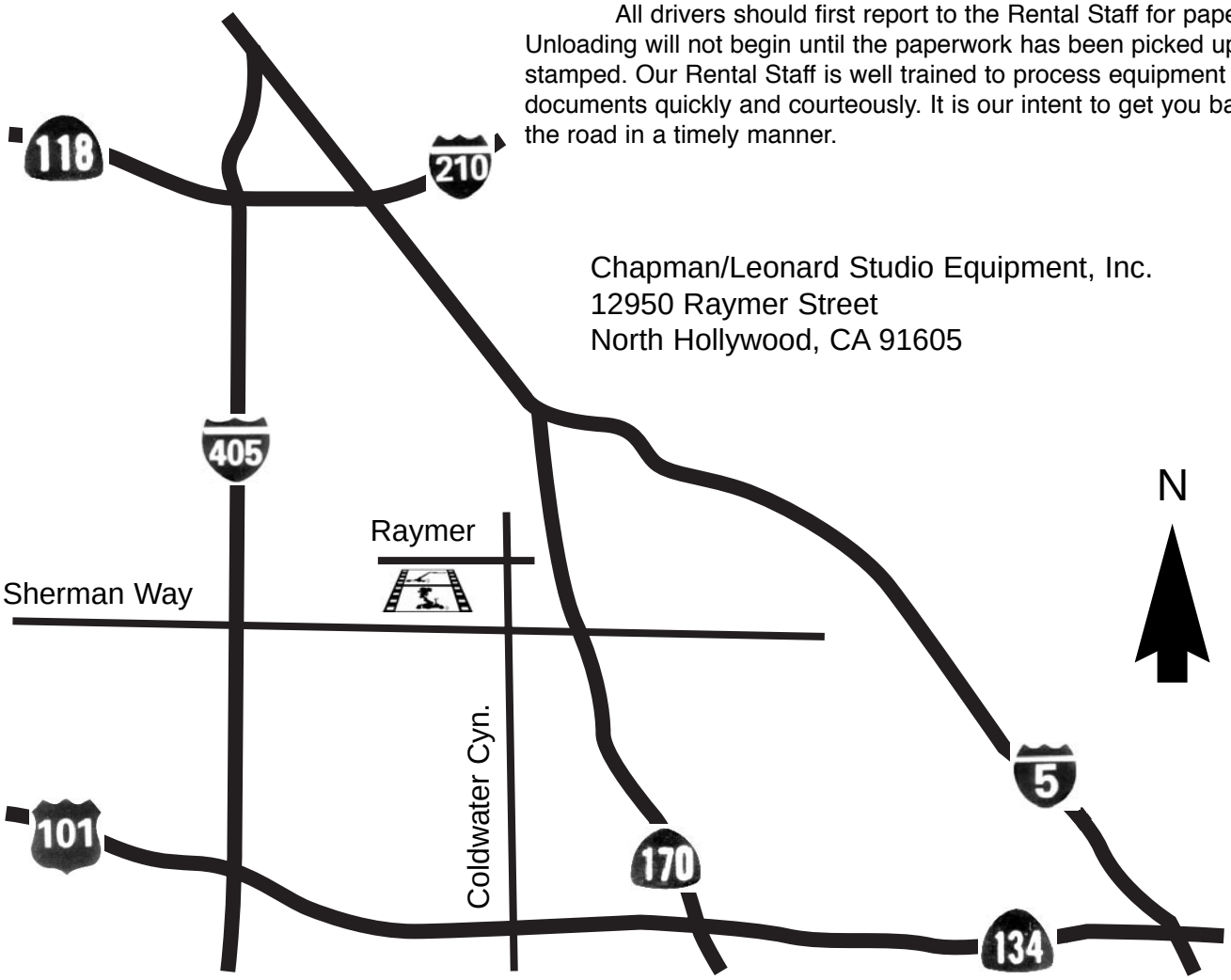
General Liability (each occurrence)	$1,000,000
Rented and/or Leased or Misc. Equipment	$250,000

Chapman/Leonard Studio Equipment, Inc. must be shown on the certificate as additional insured and named loss payee for any and all rentals. Coverage is from portal to portal.

The Customer should be sure that the Dolly is properly crated for shipment. Get a signed receipt from the Shipping Company that will be transporting the Dolly. Keep the receipt from the transport company indicating that the Dolly has been shipped to Chapman/Leonard Studio Equipment, Inc.

When picking up or returning rental gear to Chapman/Leonard Studio Equipment, Inc., please remember that rentals are due back by 12 noon at our North Hollywood facility. The Rental office is open from 7 a.m. to 6 p.m. Monday through Friday and 8 a.m. to 1 p.m. on Saturdays. The Rental bays are located on your left, immediately after entering the studio yard from Raymer Street. Trucks should be backed up to the bays for easier loading. If no bays are available, you can temporarily park on Raymer Street and advise the Rental Office of your arrival. A Customer Service Agent will advise you when a spot opens at the bay.

All drivers should first report to the Rental Staff for paperwork. Unloading will not begin until the paperwork has been picked up and stamped. Our Rental Staff is well trained to process equipment and documents quickly and courteously. It is our intent to get you back on the road in a timely manner.



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Orlando 888-337-8243 or 407-851-3456
David Bullard - Field Technician/Trainer (Orlando, Florida) Pager 800-913-0232

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